REMARKS

Summary of Amendments

Claims 1, 2, 3, 5 and 6 have been amended to address the objections to these claims, and the § 112 rejections of claims 5 and 6. In turn, claims 7 and 8 have been revised to accord with amended language of claims 1 and 2.

To address the § 102 rejections of independent claims 1 and 2, the process of "injecting a second volume of oil into the taper-seal area of the bearing unit" has been added to the second step recited in claim 1, and the clarification, "removing a surplus volume of oil from the taper-seal area to reduce to a certain volume the oil occupying the taper-seal area " as been added to the second step recited in claim 2.

Claims 13-16 are withdrawn, as mentioned in section 2 of the Office action.

Claims 1-12 are thus pending further examination on the merits.

It is noted that under "Disposition of Claims" on the "Office Action Summary," claims 13-16 are indicated as being "rejected," while claims 1-6 are indicated as being "objected to." From the detailed action itself, however, it is clear that claims 1, 2, 5 and 6 are objected to, and claims 1-12 are rejected.

Claim Objections

Claims 1, 2, 5 and 6 were objected to for not meeting requirements as to form, in that the recitation "a first pressure or lower" in these claims is ambiguous. To remedy the ambiguity of the term "or lower," the Examiner kindly suggested a revision that provides a reference point i.e., atmospheric pressure. Nonetheless, since the reference point is the first pressure itself, Applicants have amended the phrase in question to read, "at least a predetermined pressure "

Claim 2 was objected to for not meeting formal requirements in that the first-instance recitations of "a third step" and "a fourth step," as well as of "a third volume of oil" and "a fourth volume of oil" in this claim are confusing.

Applicants intended the recitations of "a third step" and "a fourth step" to express that these steps are different from the first and second steps recited in claim 1, and intended the recitations of "a third volume of oil" and "a fourth volume of oil" to indicate the association of these volumes uniquely with the processes recited in the respective steps. In particular, the "fourth step" and its associated "fourth volume of

oil" originally recited in claim 3, which depends from claim 1, are the same as the "fourth step" and "fourth volume of oil" originally recited in independent claim 2.

Claim 2 has been amended so that the first two steps set forth in the claim are recited as "a first step" and "a second step." Further, claim 2 has been amended in the preamble to recite, "the bearing unit . . . [is] designed to retain a preestablished oil volume," and in that first step to recite, "oil in an amount that exceeds said preestablished volume," in lieu of reciting "a third volume of oil."

It is believed that by virtue of the flow of the description of the embodiments in the present specification, Applicants' intention in using the terms "third step" and "fourth step" together with "third volume of oil" and "fourth volume of oil" will remain understood, irrespective of the present amendments to the claims.

Claim 3 was objected to for not meeting formal requirements in that the first-instance recitation of "a fourth step" as well as of "a fourth volume of oil" in this claim is confusing. Applicants' intention in using this language is as explained above regarding the objection to claim 2.

In claim 3, the step originally recited as "a fourth step" as been amended to "a third step," thereby following in logical sequence from the first and second steps recited in claim 1, from which claim 3 depends. Further, the recitation of "a fourth volume of oil" has been amended to "a surplus volume of oil."

It is respectfully submitted that the above-explained revisions have corrected claims 1, 2, 5 and 6 as required.

Claim Rejections under 35 U.S.C. § 112

Claims 5 and 6, and by extension claims 7, 8, 11 and 12, were rejected under 35 U.S.C. § 112 for indefiniteness. The indefiniteness lay in the recitation in claims 5 and 6, which depend respectively from independent claims 1 and 2, of maintaining for a predetermined time period a process that is recited *as part* of the first steps set forth in claims 1 and 2, yet was recited in claims 5 and 6 as being done "in advance" of the respective first steps.

To provide antecedent basis for amending claims 5 and 6 to address this rejection, in the first place claims 1 and 2 have each been amended to recite, "a first step including a substep (a) of . . . reducing the pressure of the environment surrounding the bearing unit to at least a predetermined pressure, and a substep (b) of injecting" a prescribed amount of oil "into the taper-seal area of the bearing unit."

Then claims 5 and 6 have been amended each to recite:

> A method of manufacturing fluid-dynamic-pressure bearings . . . wherein in said substep (a), the predetermined pressure is maintained for a predetermined time period.

In sum, the present amendments recite the first step in claims 1 and 2 as divided into two substeps, and rephrase the subject matter of original claims 5 and 6 as the limitation of maintaining for a predetermined time period the state resulting from the first of the two substeps.

It is believed that accordingly the rejections of claims 5 and 6 under this section have been overcome, and it is respectfully submitted that the secondary rejection of claims 7, 8, 11 and 12 as depending from primarily rejected claims has been rendered moot.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 4 and 5; Nakamura '180
Claims 1, 5 and 7; Wuester, Sr. '841
Claims 1-6 and 9-12; Nippon Densan (JP) '653

Three separate rejections under 35 U.S.C. § 102 have been made in the present Office action. Claims 1, 4 and 5 have been rejected as being anticipated by U.S. Pat. No. 6,733,180 to Nakamura, which the Office notes is an English patent family equivalent of WO 02/48564. Claims 1, 5 and 7 have been rejected as being anticipated by U.S. Pat. No. 5,862,841 to Wuester, Sr. Claims 1-6 and 9-12 have been rejected as being anticipated by Japanese Unexamined Pat. App. Pub. No. H08-270653 to Nippon Densan (i.e., "Nidec," the assignee of record in the present application).

These three separate rejections will be addressed according to the patentability of independent claims 1 and 2. It is noted that while claim 1 has been rejected over each of the three references, claim 2 stands rejected only over the Nippon Densan '653 reference.

Claim 1 has been amended to recite "injecting a second volume of oil into the taper-seal area of the bearing unit" in the second step after having injected, as recited in the first step, the first volume of oil into the bearing unit taper-seal area.

It is respectfully submitted that none of the prior art of record anticipates—that is, *prima facie* discloses each and every feature of—the present invention as now set forth in claim 1.

Accordingly, it is likewise submitted that because claims 3, 4, 5, 7 and 9 depend either directly or indirectly from a now allowable claim 1, the rejection of these dependent claims under this section is rendered moot.

Regarding independent claim 2, the Office action alleges Nippon Densan '653 "discloses that excessive oil, corresponding to a fourth volume, may be removed from the bearing unit and discharged from the filling apparatus," citing paragraph [0022] from the JPO machine translation of the reference. The last sentence of paragraph [0022], which is what the Office action appears to be referring to specifically, translated by a human being reads,

> Excess oil pools in the oil discharge vat 58, and so that it does not go toward the vacuum pump 51, once a certain level has accumulated it is discharged so that it can be reused.

That is, spillover oil from the process of charging successive bearing units 31 drains into the vat 58, and when the oil in the vat 58 reaches a certain level, it is discharged, most likely back into the reservoir 53, for reuse.

In contrast, claim 2 setting forth the present invention recites a second step including the process of "removing a surplus volume of oil from the taper-seal area to reduce to a certain volume the oil occupying the taper-seal area."

Nippon Densan '653 discloses discharging oil from a spillover vat; nowhere does this reference disclose or even suggest removing a surplus volume of oil from a taper-seal area of a bearing unit, in particular in a controlled manner so as "to reduce to a certain volume the oil occupying the taper-seal area."

It is respectfully submitted that none of the prior art of record anticipates—that is, *prima facie* discloses each and every feature of—the present invention as now set forth in claim 2.

Accordingly, it is likewise submitted that because claims 6, 8, 10 and 12 depend either directly or indirectly from a now allowable claim 1, the rejection of these dependent claims under this section is rendered moot.

Rejections under 35 U.S.C. § 103

Claims 7 and 8; Nippon Densan (JP) '653 in view of Wuester, Sr. '841

Claims 7 and 8 were rejected as being unpatentable over the Nippon Densan reference in view of the Wuester, Sr. reference, both of which were cited in making the 35 U.S.C. § 102 rejection discussed above.

It is respectfully submitted that for the foregoing reasons presented in addressing the rejections under 35 U.S.C. § 102, the patentability of the present application rests in independent claims 1 and 2 to begin with, and thus also in the claims rejected under this section of the Office action—claims 7 and 8, which depend from claim 1 and claim 2, respectively.

A response to this Office Action was due by September 22, 2005, and consequently a Petition for Extension of Time, along with a credit-card payment authorization form, is attached hereto. Please consider this Amendment as timely filed.

Accordingly, Applicant courteously urges that this application is in condition for allowance. Reconsideration and withdrawal of the rejections is requested. Favorable action by the Examiner at an early date is solicited.

Respectfully submitted,

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